Bhanu Garg

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EDUCATION

UC SAN DIEGO
MS in ECE
Focus - Machine Learning
Mar'21 - Dec'22 | CA

IIT KANPUR
BTech in Elec. Engg.
Jun 2018 | Kanpur, India
Minor : Management Studies
GPA: 8.5/10

COURSEWORK

GRADUATE
Visual Computing*
Stochastic Calculus*
* : Currently enrolled

UNDERGRADUATE
Data Structures and Algorithms
Linear Algebra and ODE
Probability and Statistics
Image and Digital Signal Processing
Mathematical Structures for Signals
Machine Learning
Database Management

SKILLS

PROGRAMMING/TOOLS
Proficient:
Python • Shell • LaTeX
PyTorch • Numpy • Pandas
MySQL • GCP • Docker
Comfortable:
C • C++ • FFMPEG
Modalities:
Computer Vision • Image processing
Machine Learning • Deep Learning
Video processing

OTHERS

LEADERSHIP

Techkriti Head Public Relations
•Led a team of 100 executives for the annual technical college fest

Senator, Students' Gymkhana
•Elected member out of 6 elected representatives from the UG batch

EXPERIENCE

SHARECHAT | Machine Learning Engineer intern
Oct 2020 - Jan 2021
- Worked in the video content intelligence team for a TikTok like app.
- Problem statement is to classify videos using multimodal (video, audio, experts) features on a hierarchical taxonomy.
- Explored and implemented r3D, r(2+1)D architecture backbone for videos; and hierarchical multilabel classification amongst others for classification. Increased accuracy from 30% to 75%.
- Experimented with self supervised contrastive loss based learning for videos.

AMERICAN EXPRESS | Analyst - Credit Risk
Jul 2018 – Jul 2019 | Gurgaon, India
- Researched attributes for credit risk management models for 22 markets with a total of 95 million cards by combining strong business intuition with machine learning (LSTM, XGBoost).
- Formulated metrics that were most effective in representing high balance defaulter behaviour. Created a production ready system to backtest models.
- Developed algorithm to detect anomalous credit card applications by leveraging credit bureau and application data.

RESEARCH / PROJECTS

Neural Architecture Search and meta learning
Feb 2021 – Present | Supervisor : Prof Pengtao Xie
- Design human inspired meta learning framework for learning neural architecture search.

IIIT-H ML LAB | Research Associate - Prof Naresh Manwani
Jul 2019 – May 2020 (full time)| Hyderabad, India
- Research with focus on robust learning - its applications in computer vision, and learning with complementary labels.
- Proposed an unbiased estimator approach that gives a rank consistent model and estimate noise rates from the data.

Financial market forecasting | [Report]
Jan 2019 – Apr 2019 | Supervisor : Prof Debasis Kundu
- Predict price movements of banks on NIFTY leveraging technical indicators (RSI, moving average etc). Used the predictions to develop a trading strategy. Achieved returns of 20% by backtesting strategy for 2 trading years.

ACHIEVEMENTS

Awarded the **Academic Excellence Award** (IIT Kanpur) for year *2015-16*.

Secured **All India Rank – 322** in JEE (Adv) - *2014* amongst 1.5 million candidates.

Recepient of **KVPY** (Kishore Vaigyanik Protsahan Yojana - SA) fellowship - *2012-13*

Qualified **NTSE** (National Talent Search Examination - Karnataka), Rank – 20

PUBLICATIONS

[1] Bhanu Garg and Naresh Manwani. Robust deep ordinal regression under label noise. In *Proceedings of The 12th Asian Conference on Machine Learning*, pages 782–796, 2020.